

Governor's Task Force on Energy Efficiency and Renewables**Public Hearing
Green Bay, Wisconsin****June 15, 2004****Dr. John F. Katers**

As a faculty member in Natural and Applied Sciences at UW-Green Bay, I would like to urge the Task force to recommend fully funding Focus on Energy during the next biennium. Program cuts to Focus on Energy during the past two years, particularly the discontinuation of the R&D program, have had a negative impact on research and development activities in the public and private sector. This discontinuation of funding not only hinders the development of innovative renewable energy systems, but also has a negative impact on educational and economic development opportunities for UW System and the entire state of Wisconsin.

In the five years that I have been a faculty member at UWGB, there has been a tremendous increase in student interest for renewable energy courses taught at UWGB, including the graduate/undergraduate course on Solar and Alternative Energy Systems and the undergraduate course on Energy and Society. Some of this has to do with the multiple renewable energy systems that are part of Mary Ann Cofrin Hall, the newest academic building at UWGB, with data gathered from these renewable energy systems providing real life data for students to evaluate. It should be noted that the installation of some of the renewable energy systems that are part of Mary Ann Cofrin Hall were only made possible by funding programs such as Focus on Energy and the contributions of the local utility, Wisconsin Public Service.

It should also be noted that I have personally supervised five graduate thesis projects in the past three years that were related to renewable energy and served on several other renewable energy related thesis projects. Many of these projects were directly related to Focus on Energy funded projects or other renewable energy installations that were likely the beneficiaries of knowledge gained during the successful installation of Focus on Energy projects. Upon graduation, these students have been successful in obtaining full-time positions in the renewable energy or environmental field. However, many of them have found work outside of Wisconsin, where more opportunities are available in these fields, contributing to the ongoing concern about "brain drain" in Wisconsin.

In conclusion, the opportunities lost by not fully funding Focus on Energy will have a negative impact on R&D, educational opportunities and economic development for UWGB, Northeastern Wisconsin and the entire state. Therefore, I strongly urge the Governor's Task Force to recommend full funding for Focus on Energy during the next biennium.

Thank you.

June 15, 2004

Dear Mr. Cullen:

We are unable to attend the public hearing scheduled for today, but would like to take this opportunity to state our support for the state Focus on Energy program. The funding for this program does not come from tax revenues but from a utility ratepayer funded initiative and should be treated as such.

As small business owners, and as advocates for energy conservation and renewable energy sources, we are disappointed with the funding cutbacks that Focus on Energy is experiencing for the coming year.

Improving the state's energy conservation and renewable energy production is a very effective way to keep Wisconsin dollars in our state to benefit our citizens. Indeed, the dollars saved and the jobs created through conservation and renewables will continue to reward our investment year after year, long after the money we send out of state to purchase fossil fuels has been forgotten.

We also feel that the Renewable Energy Standards should be raised to 10% of utility production by the next decade. This would have little impact on rates and in the long term, provide a more stable production base away from fossil fuel dependence.

Sincerely,

Mark Klein and James McKnight

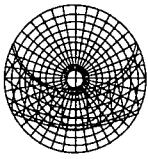
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June 14, 2004

Lee Cullen, Chair
Governor's Task Force on Energy Efficiency and Renewables
Cullen, Weston, Pines, & Bach LLP
122 W. Washington St., Suite 900
Madison, WI 53703

Dear Mr. Cullen,

Due to a scheduling conflict, I am unable to deliver the following remarks at the Public Hearing of the Governor's Task Force on Energy Efficiency and Renewables, held on June 15th, 2004 (9:30-11:00 a.m.), State Capitol - Room 411 South, Madison, WI. Please enter my testimony into the hearing record.

Frankly, I find it disheartening that it is - once again - necessary to provide testimony in support of Wisconsin's Public Benefits program. It was our governor who made a campaign pledge to maintain current funding levels for programs supporting energy efficiency, renewable energy. Other energy related campaign pledges made by our governor include:

- Setting a state goal that 10 percent of Wisconsin's energy to be derived from clean, renewable energy sources within ten years.
- Promoting and implementing policies for cleaner sources of power to comprise a greater portion of Wisconsin's electricity needs.
- Supporting the phase out of mercury emissions from coal-fired power plants.

Given Wisconsin's growth of electricity consumption and reduced economic growth, it is distressing that energy efficiency and renewable energy are not at the governor's policy forefront. Energy security, reliability, job creation, and clean environmental attributes are benefits that need to be translated into durable and effective energy policies. Most of the industrialized countries are way ahead of the curve in clean energy initiatives and advancing at an increased rate - they employ far-sighted policies. What will it take for the administration to realize that the fundamentals of its favored initiatives - education, human services, environmental stewardship, economic growth, etc. - can be assisted with sound energy policy? With frequent budget shortfalls, there obviously is a systemic problem in the budget process. Why exacerbate the development of Wisconsin's energy future by fueling systemic budgetary problems with short-sighted policies.

I urge the Governor's Taskforce to make unanimous the following policy goals.

1. Protect Focus on Energy funds. Do not allow these funds to be used for anything but energy efficiency and renewables.
2. Restore full funding to the public benefits program. We need energy policies that are consistent and long-term for energy efficiency and renewable energy market development.

3. Increase the renewable energy portfolio standard for utilities to at least 10% by 2013. This was a campaign pledge and it should be made policy.

4. Provide a Wisconsin sales tax exemption for small renewable energy systems. This will provide additional incentive to grow the clean energy marketplace.

5. Require the purchase of 10% of electricity from renewable energy to be used at state facilities. Wisconsin should set the example for individuals and corporations with its own action.

Please effect these recommendations so that Wisconsin can continue to be a leader in progressive energy policy.

Regards,

Larry Krom

Larry Krom, president
L&S Technical Associates, Inc.



Executive Summary:

Many states are instituting or strengthening Renewable Portfolio Standards (RPS), because of the economic, energy independence, and environmental benefits. Economic theory and experience have demonstrated that the most effective way to accomplish the goals of an RPS is the “cap-and-trade” approach of freely tradable energy credits, which allows the least-cost producer to provide renewable energy. Also, defining the standard to clearly indicate measurement and ownership of credits, and to include multiple sources, creates the most functional standard. Finally, the most forward-thinking RPSs include special requirements for photovoltaic energy sources, which offer attractive benefits beyond those from other renewable sources, but which are not yet as commercially viable.

Reasons for RPS:

Based on its natural resources, producing electricity using the traditional model of central station power and a system of transmission and distribution wires requires Wisconsin to import the fuel for those power plants. The same is true of the gasoline which powers Wisconsin’s automobiles. By requiring that a certain percentage of the primary energy for these processes comes from renewable sources, the state drives businesses to move from imported energy sources (and exported wealth) to energy resources present in the state.

A related point is the effect of increased efficiency. Using natural gas to make electricity, which then runs an electric heater, which then heats water for a swimming pool uses more natural gas per unit of hot water than burning the natural gas to heat water directly *at the site of the pool*. Better still is using a combined heat and power system or a solar hot water heater to make the hot water using less or even no natural gas.

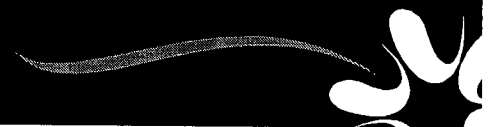
Utilizing in-state energy sources for Wisconsin’s energy needs will result in the immediate creation of additional jobs to design, manufacture, install, and/or maintain these new energy systems. This not only represents new jobs, but high-value skilled jobs, which will lead to a higher value workforce. These jobs benefit from the familiar multiplier effect, by which each dollar Wisconsin retains in-state through the use of renewable energy, provides more than one dollar of benefit to the Wisconsin economy.

Each unit polluting fuel which Wisconsin does not use for energy production is pollution from one unit of polluting fuel which Wisconsin does not have to live with. This makes for a better standard of living, and further adds to the economic multiplier effect, by leading to better health throughout the state.

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Reasons for RECs within the RPS:

When the federal government first explored legislation to limit sulfur dioxide emissions, experts proposed several models. Among these was the innovative “cap-and-trade” model which became the basis for the 1990 Clean Air Act’s Acid Rain Program. Under this model, utilities shared a limited supply of emission allowances, which they could buy and sell, but whose total quantity of emissions the companies could not exceed. In spite of early concerns, this system resulted in faster than planned sulfur dioxide reductions at a lower cost than regulators had anticipated, with credits trading for approximately \$200/Ton compared to early estimates of \$750/Ton. The European Union is initiating an even more ambitious system, guided by similar dynamics, to control multiple emissions including greenhouse gases.

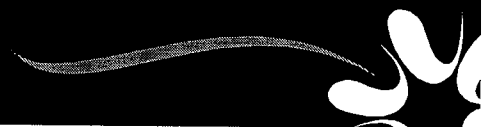
Another important reason for tradable RECs is that they result in pollution abatement by the least-cost producer. Requiring a certain quantity of abatement, and then putting a floor on the price for that abatement by restricting who can provide it, leads to a higher cost to the citizens of Wisconsin. On the other hand, allocating a certain amount of funding, and then binding the state to higher cost producers will needlessly limit the quantity of benefit the state can afford to purchase. *This country first embraced the traditional utility model because it provided electricity at the lowest cost to customers. We should elect function over form and again choose the least-cost option.*

RECs allow the entities who value RECs the most dearly to buy them, and those who can provide them the most cheaply to provide them. By encouraging active participation and direct subsidies from the interested consumers to the willing producers, a REC market serves to make renewable energy less expensive to produce, and more widely in the public eye. This further increases its adoption, and further serves the goals of the RPS. It also provides the regulatory bodies with a clear indication of the costs of these changes – which would allow them to increase goals if they’ve exceeded expectations.

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Reasons to Define Qualifying Sources Broadly:

In a market where compliance requires participants to purchase a certain amount of renewable energy credits from biomass, photovoltaics, and wind, solar thermal technologies and even certain energy efficiency measures will experience a reverse-subsidy, which will make them less cost-effective. They will then be used less, resulting in less reduction in natural gas consumption, and, thus continued high demand for natural gas and its distribution system. Since wind energy typically relies on gas turbines for load following, this will lead to additional cost for implementing wind, which results in artificially high demand for photovoltaic technologies. The result is a reduction in overall energy use, but at a higher cost. If the RPS acknowledges *all* sources which reduce undesirable energy production, the state will receive greater benefit.

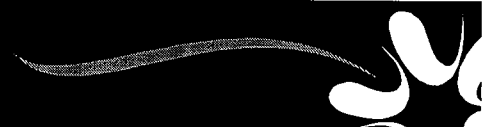
If the Wisconsin legislature enacts a portfolio standard which is restrictive in the sources of renewable energy and energy conservation it admits, the people of Wisconsin will have to pay more for the same amount of energy savings. The most effective RPS will honor RECs from the least-cost producer, thereby affording the maximal benefit at the minimal cost to the state and its rate-payers. While creating such a broad definition of RECs risks undervaluation or misrepresented REC production, pricing RECs to account for the cost of verifying the energy savings mitigates this. For example, saving energy by using more efficient air conditioning may only cost \$3/unit, but cost \$4/unit to save energy using variable speed drives on industrial motors. If verifying the energy savings costs \$3/unit saved for the air conditioning, but only \$1/unit for the variable speed drives, the variable speed drives are the more efficient means of conserving energy.

Conversely, allowing many different technologies to qualify as RECs will result in synergistic benefits. Increased use of solar hot water means less demand on the existing natural gas infrastructure. This extra capacity can then provide gas to natural gas peaker plants which load-follow wind farms (allowing for large-scale renewable energy production without compromising the stability of the electrical grid – a concern many express with wide-scale deployment of wind farms). The result is greater use of renewable energy, and channeling natural gas to the higher-value role of electricity generation and electrical grid support.

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Recommendations:

Define a common currency for the energy units – The most critical aspect to a successful RPS is to remove all ambiguity. While we measure gasoline in gallons, oil in barrels, electricity in kilowatt-hours, and thermal energy in BTUs, accurately recording RECs depends on a single, agreed unit of measurement. In order that the REC markets provide the greatest support to the RPS, they must have both legitimacy and liquidity. *One challenge in this method of measurement is that it is an aggregate, and so it will be an approximation, rather than entirely exact. This is not an undesirable result, as all RPSs involve approximation.*

Plainly define who holds title to the RECs for a project which receives a state-funded rebate, a utility rebate, below-market loans, or similar incentives. Risk of nullified contracts has slowed growth of REC trading in markets where this ownership is not explicitly characterized.

Photovoltaic technology deserves special consideration in any RPS. Photovoltaic technology offers unique benefits in grid-support. Photovoltaic technology offers high-technology, high-value jobs. Photovoltaic technology has made great strides, but is still commercializing. Solar photovoltaic provides the follow-on benefits of a skilled workforce which has learned the skills of electrical systems, power-conditioning systems, and energy system maintenance and monitoring which allow it to offer additional technologies as they become commercially viable. Accordingly, the Wisconsin RPS should follow the lead of other leading portfolio standards by granting a special “carve-out” for solar photovoltaic.

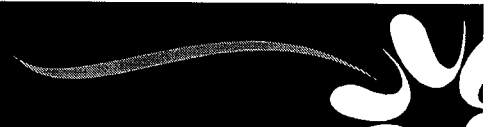
Conclusion:

A thoughtful RPS can provide Wisconsin with many lasting economic and social benefits. Properly implemented, this program can bring low-cost improvements to public health, energy diversification, grid-reliability, and price stability, as well as attractive new businesses and creating jobs. We hope to see Wisconsin embrace this successful energy policy option.

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Written Comments on Energy Efficiency and Renewable Energy in Wisconsin
Before the Governor's Task Force on Energy Efficiency and Renewables
June 17, 2004
Jerry Mendl

Thank you for receiving these written comments in lieu of public testimony at the hearings on June 15, 2004 before the Governor's Task Force on Energy Efficiency and Renewables.

Energy efficiency is economically the lowest cost and environmentally the most benign energy resource available to Wisconsin. Even under lower electricity prices a decade ago, electric consumption could have been reduced by 30% or more through the implementation of cost effective achievable energy efficiency. Under current higher electricity prices and in the advent of new energy efficient technologies, one can only conclude that amount of cost effective energy efficiency available has increased. I don't have to look too far or too hard to see energy efficiency opportunities today, e.g., many incandescent lights are still being used where fluorescent lights would be feasible, consuming more energy for light and creating a higher air conditioning load. Energy efficiency is unfortunately still an untapped resource, and will likely remain largely untapped if the funding for Public Benefits program that was created to tap this resource is raided.

Renewable energy resources provide greatly needed cost stability – they are not subject to fuel price escalation. The technological advances of the past decade have lowered the cost of some forms of renewable energy to be competitive with the electric generation being constructed for utilities and certainly less expensive than much of the power being purchased by utilities for resale. Renewables have an important role to play in Wisconsin's electric security and supply.

Ironically, the funding of the Public Benefits program has been diverted to help reduce the state budget deficit at exactly the time that the Public Benefits program should have been most vibrant, i.e., leading up to and during the next major cycle of power plant construction in Wisconsin. It has been difficult to interrupt the cycle of demand growth and construction – when loads are growing, it is difficult for decision-makers to rely on promises of energy efficiency and renewable energy programs, and conventional resources are authorized. After the conventional resources are authorized, decision-makers see sufficient capacity and no immediate need for energy efficiency or renewable resources. The cycle continues. Regrettably the viability of the Public Benefits program was undermined when funding was diverted at exactly the most crucial time, the time leading up to the current construction cycle.

With that as context, my comments are very straightforward:

- The funding for Public Benefits must be secured. The Public Benefits program now administered by the State is intended to deliver the energy efficiency and renewable resources previously implemented by the utilities to better serve their ratepayers and reduce ratepayer costs. The funds are collected through utility rates, and to the extent they are used for energy efficiency and renewable energy, continue to provide ratepayer benefit. To the extent those funds are diverted, the public benefits program is downsized, and ratepayers pay dearly – i.e., two or more times as much for conventional resources to replace the reduced energy efficiency. Public Benefits funding must not become a tax that supports other State Government needs and has no benefit to utility ratepayers.
- The funding for Public Benefits must be increased, not only to its previously authorized levels, not only to the levels previously expended by the utilities under PSCW direction, but

to higher levels commensurate with capturing more of the untapped resource for economic and environmental benefit.

- It should be the objective of Public Benefits to capture all energy efficiency resources that can be captured with a benefit to cost ratio of more than one. As long as the ratio is greater than one, the energy efficiency resource is less expensive than conventional resources. Historically, the net benefit to cost ratios have been significantly above one, providing a large benefit relative to conventional resources and also showing the existence of a missed opportunity for saving money and energy.
- Energy efficiency and renewable resources have a much higher local economic multiplier than conventional generation, contributing more to the development of Wisconsin's economy. The unprecedented reliance of Wisconsin utilities on transmission lines and out of state power purchases in effect is exporting money that would stimulate the local economy if it were spent on energy efficiency and renewable energy resources.
- To stimulate renewable energy resources, the State of Wisconsin should be required to purchase substantial portions of its energy needs from renewable resources. As a policy, a goal of 20% by 2010 seems reasonable. I would also like to see most of that from Wisconsin based renewable energy, to stimulate renewable energy resource development in Wisconsin, so that the benefits of the local economic multiplier would also accrue in Wisconsin.
- I also support a higher renewable energy resource portfolio standard requiring Wisconsin utilities to secure a larger portion of their electricity for resale from renewable resources. Recent studies have shown that renewable electric generation levels up to 20% of system capacity does not pose problems for the operation and stability of the electric supply system. Again, I would like most of the utility renewable resource portfolio to be from Wisconsin based renewable energy, to stimulate renewable energy resource development in Wisconsin, so that the benefits of the local economic multiplier would also accrue in Wisconsin.
- Regarding energy efficiency, revisions to the State's Energy Codes for residential and commercial construction are appropriate to update them to current energy prices and energy efficiency technologies.
- I would also recommend that the PSCW examine extension of service rules to assure that they appropriately reflect the cost of serving customers and to formulate policy that encourages efficient and reasonable energy use. The extension of service rules should consider sliding scale fees dependent on the size and efficiency of load being attached.
- State and local government buildings in Wisconsin should be required to become models of energy efficiency because it would stimulate energy awareness, save money, stimulate the local economy and preserve our environment. It may be appropriate for the State to provide energy efficiency funding from Public Benefits to local government to assist them in meeting the requirement.

I would be pleased to address any questions you may have regarding these comments.

Again, thank you for the opportunity to be heard regarding the role energy efficiency and renewable energy in Wisconsin.

Christian A. Nielsen
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Ladysmith, WI 54848-9712

The Governor's Energy Task Force
C/O Lee Cullen
112 W. Washington Ste. 900
Madison, WI 53703

June 13, 2004

Dear Mr. Cullen,

I was one of the listeners and call-ins on WHWC- 88.3 FM with Joy Cardine that brought up the subject of Hydrogen fuel extracted from water through the electrolysis process.

Granted, Sir, I may not hold down a degree of any sort or type from a school of higher education than to what I have, and, that is a high school diploma. I wanted you to know this first hand.

I have done quite an extensive research and study into this phenomena of the electrolysis of water into its elements of hydrogen and oxygen gases, and using the gaseous hydrogen fuel as a fuel in gasoline fueled vehicle engines.

The reason behind of producing hydrogen gas from water, the type of water used, is so expensive at this time and date of our history is that it is distilled, or, pure water that is being used in this experimental stage of this research. And, anybody that has had any electronic experience, knows that pure distilled water acts as an insulator towards the flow of direct current electricity.

Keeping in mind my last statement in the last paragraph above, then, the amount of direct current electrical potential has to be at such a great potential in order to flow across the capacitance barrier so that the pure distilled water will break down into its separate elements of hydrogen and oxygen gases, with the hydrogen gas being the volatile element that is highly explosive in the proper atmosphere.

Instead of using distilled pure water that is an insulator to electrical direct current flow, use water that has impurities dissolved in the water such as Calcium Chloride - salt, or any other impurity of which will cause the water to be electrically conductive, of which, the end results is pure hydrogen and oxygen gases.

Throughout our great nation, we are experiencing a problem with polluted waste water, and, having a time trying to figure out a way to curb this ecological problem. There is a way to clean up the water, and, simultaneously, create all the vaporized hydrogen gas there is for internal combustion engine usage, leaving the pollutants behind in the process of the electrolysis of water solution tank.

In the process of chrome plating vehicle bumpers and the likes, the process used to chrome plate that bumper is the electrolysis process. This same process is used in gold plating the ring that you may be wearing. And, with each and every item that is electro-plated, the process used is electrolysis. And, from this electrolysis process, there is quite an abundance of hydrogen and oxygen gases released into the atmosphere, of which could be piped off to high pressure gas tanks, such as those used for bottled gas welding cylinders that hold a pressure of 2,000 pounds per square inch.

Sir, I do know that it is unfeasible to compress hydrogen gas into a liquid gas at our atmospheric temperatures. At a temperature of 60° F. the pressure of a hydrogen gas cylinder would have to withstand a pressure of approximately 56,960.12903 pounds per square inch. At a minus 30° F. the pressure of liquid hydrogen gas is at 47,101.64516 pounds per square inch.

Liquid hydrogen gas, at these atmospheric temperatures, needless to say, would be a bomb waiting to explode, and, create massive destruction in its immediate surroundings.

Hence, the next best thing, and, the safest of them all, of extracting hydrogen gas from impure water, polluted water, is the "ON- DEMAND" method, the hydrogen gas is extracted as the vehicle's engine requires it, has a demand for it, in the same manner of which the gasoline type engines require their fuel demand from liquid gasoline.

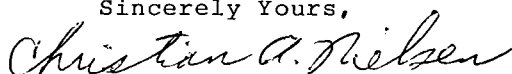
Not only will we have a source of fuel for our vehicles, we will, simultaneously, will be cleaning up the atmosphere of pollutants, cleaning up the waste and polluted waters, and, eventually, will have clean pure water at our disposal for drinking, and, for all the other uses that pure clean water is used for.

Sir, as I mentioned earlier, I am only a high school graduate. I have spent a four year term of duty in the United States Air Force in the electronic career field of Ground Radio Maintenance and Repair, of which I am proud to announce. And, it is this electronic knowledge that has led me to this point in time of my life, of I, possibly, knowing things that the average citizen of our great nation doesn't comprehend.

Hence, Sir, if you are interested in continuing to what I may have in my possession of knowledge on this subject, I would be delighted to do some brain storming with you, and/or your colleagues.

Thank you for taking the time to read this letter to you. And, if by chance, that you care to respond to this letter, I will be looking forward to hearing from you in the near future.

Sincerely Yours,

A handwritten signature in cursive script that reads "Christian A. Nielsen". The signature is fluid and elegant, with a prominent initial 'C'.

Christian A. Nielsen

Code Items

Guiding Principles/Framework

- 1) Adopt code that reflects up-to-date knowledge and practices, upgrade from 1989, 17 years by 2006, i.e. bring base up
- 2) Adopt code that is easy for A&E community to use and understand
- 3) Develop a standard/approach for achieving energy efficiency above code for those that choose to do so. Option: Advanced Buildings;
- 4) What WI specific issues/climate would make it beneficial to create a few exceptions to the code?

Those noted in Code Collaborative:

Lighting power densities

SHGC for windows

Residential Thermostats

Plus control/use/recovery of outdoor air

Details

Support revised IECC

Same code for all buildings in state- Comm and DFS

Consider language requiring DFS to adopt Comm

Support Comm updating IECC as soon as possible

Support 3 yr. revision cycle

Support option of state owned facilities performing better than code; use Advanced Buildings

Given WI climate would add an additional caveat to EBCC proposal; OA control/recovery

**Testimony before
Governor Doyle's Task Force on
Energy Efficiency and Renewables**

**Public Hearings
State Capitol, Madison, WI
June 15, 2004**

By

**Michael J. Potts, P.E. – Executive Vice President
Orion Energy Systems, Ltd.
Plymouth, WI**

- Orion appreciates the opportunity to present the following testimony to this Task Force. My remarks today will focus on three points, the first being the feasibility of energy efficiency opportunities in Wisconsin, especially in the customer sectors of industrial and commercial. The second will be the changes needed to induce large-scale participation by the utilities and their consumers, and the third being the efficient use of the funds that exist.
- Through our recent success in the energy efficiency market, Orion is uniquely qualified to provide testimony on the feasibility and marketability of energy efficiency solutions in these markets.
 - We are an in-state manufacturer of high-performance energy efficiency solutions, with facilities in Plymouth and Manitowoc.
 - Our company designs energy efficiency systems, which are tailored to meet the individual needs of our customers, while providing an energy efficiency platform that will have large-scale impact on the utility industry.
 - Despite the most recent economic downturn, Orion has significantly increased its sales over the past three years and has expanded its workforce from 12 employees in 2001 to over 85 today.
 - Orion's customers include both Wisconsin and nationally recognized names including Fastenal, R.R. Donnelley, UPS Logistics, Marquip Ward United, Cabela's, the Milwaukee Journal Sentinel, Caterpillar, Tecumseh, Rockwell Automation, Charter Steel, Copp's, Fresh Brands, and numerous other companies.
 - In addition to the products and services that provide the electrical capacity and energy savings, we have developed a system that measures and verifies for the customer and its utility the future savings, the financial impact, and the environmental benefits delivered by these installations.
 - To date, our products and services have delivered over 75 mega-watts of electrical capacity reduction in the commercial and industrial sectors.
- Our experience suggests that not only are energy-efficiency initiatives in the industrial and commercial sector quite feasible, they can be delivered in a manner that will provide Wisconsin's utility industry with much needed electrical capacity and energy relief. These energy efficiency initiatives, when viewed as another supply-side solution, can be done in conjunction with the generation and transmission assets that will be installed over the next decade.
- The question is then, why haven't we seen the utilities, regulators, legislators, and the consumers, undertake large-scale energy efficiency programs?
- First, to facilitate large-scale energy efficiency/electrical capacity relief in Wisconsin we need to identify the opportunities and set the targets. Many experts in this industry continue to downplay energy efficiency's potential. This needs to be changed. One mechanism would be through the Strategic Energy Assessment, in conjunction and cooperation with data supplied by providers such as us. As a state we need to know and understand the potential, and take this potential as a serious option.
- Our data suggests that the existing Building Code for Wisconsin is much too lenient when it comes to some technologies and energy uses. Our data suggests that significant electrical capacity can be achieved in both renovation and new construction projects over the next few years if the engineering and design community were to have an impetus to change. The cost to achieve this change would not necessarily come at a premium, when compared to the equipment that is currently being installed. I spend a considerable amount of time working with the architectural and engineering communities trying to induce change as it relates to energy efficiency. The usual response is no, or a go slow to change, unless the customer is explicitly asking for the change. Change, even if there are numerous and undeniable positives, is hard to do. Energy efficiency is no different.
- The second major issue facing large-scale energy efficiency installation initiatives is the current structure of expectations regarding Wisconsin's utilities and energy efficiency. No utility, whether they are an IOU, municipal, or cooperative is going to arbitrarily volunteer to reduce their customers' load,

which in turn reduces their revenues, without some form of legitimate financial benefit for their organization and their ratepayers.

- The current system lacks compensation for energy efficiency projects for utilities, yet still expects them to encourage as many technically feasible energy efficiency initiatives as possible. This has created a vested interest for some utilities to underestimate the energy efficiency opportunities in their service territories. In turn it is the State, in the form of the PSC, that steps in to mandate energy efficiency projects (i.e. the WE Energies Power the Future-2 energy efficiency obligation).
- Given the electrical capacity relief potential and significantly lower cost of energy efficiency, we believe that utilities should be able to account for investments in energy efficiency assets as they would any traditional generating or distribution asset; thereby, allowing them to earn a rate of return on their investment in energy efficiency. The customers, the utilities, and all of Wisconsin would benefit from this approach.
- Finally, the last major challenge facing board-scale energy-efficiency installation programs is the state's public benefits program.
- Orion believes that whoever runs the program, be it the utilities or the government through Focus on Energy, the goal of such a program should be to efficiently deliver as much of the funds taken in by the program, back to the customer base as possible.
- We also believe that the utilities should have some say in how their public benefits dollars are spent, be it running the programs themselves, getting part of the fund for programs and having a significant role in program oversight.
- We believe that overarching control should be shifted back to the PSC, so that they can set targets and goals for the energy efficiency returns from the program, which dovetail with the Commission's other projects to ensure a stable supply of electricity to meet the state's growing needs. An energy efficiency or load control measure can be as valuable as any spinning generation asset.
- Orion encourages this Task Force to fully recognize that there is a significant market for energy efficiency initiatives in the industrial and commercial sector. To capture this virtually untapped market, Wisconsin must:
 1. Identify the opportunity for energy efficiency potential.
 2. Create opportunities for utilities to benefit from energy efficiency initiatives.
 3. View energy efficiency as a supply-side equivalent.
 4. Advance the cause that any energy efficiency program must focus on delivering sustainable energy efficiency opportunities.